

Pelotas Platform and Basin, Assessment Unit 60370101
Assessment Results Summary

[MMBO, million barrels of oil. BCFG, billion cubic feet of gas. MMBNGL, million barrels of natural gas liquids. MFS, minimum field size assessed (MMBO or BCFG). Prob., probability (including both geologic and accessibility probabilities) of at least one field equal to or greater than the MFS. Results shown are fully risked estimates. For gas fields, all liquids are included under the NGL (natural gas liquids) category. F95 represents a 95 percent chance of at least the amount tabulated. Other fractiles are defined similarly. Fractiles are additive under the assumption of perfect positive correlation. Shading indicates not applicable]

Field Type	MFS	Prob. (0-1)	Undiscovered Resources												Largest Undiscovered Field (MMBO or BCFG)			
			Oil (MMBO)				Gas (BCFG)				NGL (MMBNGL)				F95	F50	F5	Mean
			F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean				
Oil Fields	8	0.90	0	2,548	7,184	2,938	0	5,421	16,605	6,467	0	314	1,027	388	164	639	2,185	824
Gas Fields	48						0	14,222	39,187	16,339	0	606	1,811	719	924	3,359	10,900	4,244
Total		0.90	0	2,548	7,184	2,938	0	19,642	55,792	22,806	0	919	2,838	1,107				

60370101
Pelotas Platform and Basin
Monte Carlo Results

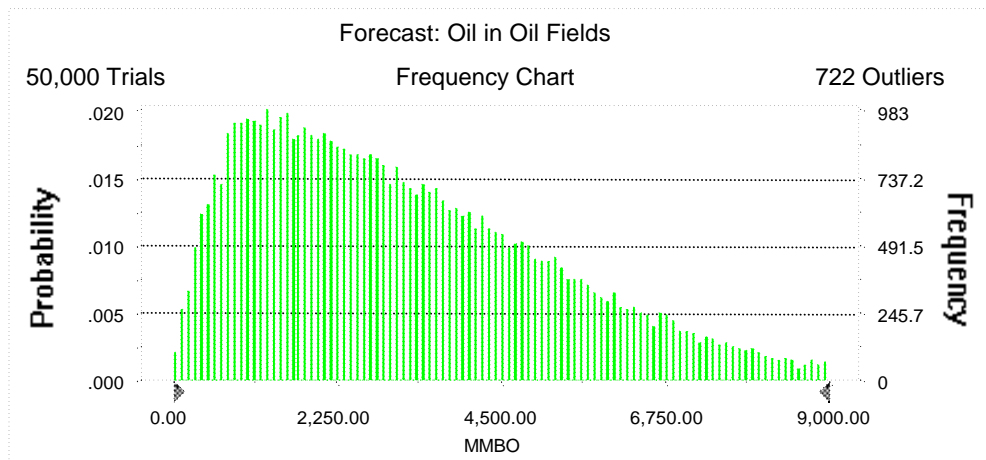
Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 9,000.00 MMBO
Entire range is from 9.77 to 16,374.90 MMBO
After 50,000 trials, the standard error of the mean is 9.62

Statistics:

	<u>Value</u>
Trials	50000
Mean	3,252.22
Median	2,842.42
Mode	---
Standard Deviation	2,151.35
Variance	4,628,298.77
Skewness	0.90
Kurtosis	3.64
Coefficient of Variability	0.66
Range Minimum	9.77
Range Maximum	16,374.90
Range Width	16,365.13
Mean Standard Error	9.62



60370101
Pelotas Platform and Basin
Monte Carlo Results

Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	9.77
95%	546.41
90%	828.62
85%	1,068.65
80%	1,307.00
75%	1,541.62
70%	1,791.36
65%	2,038.55
60%	2,297.14
55%	2,564.19
50%	2,842.42
45%	3,136.49
40%	3,456.48
35%	3,783.98
30%	4,153.80
25%	4,557.09
20%	5,011.11
15%	5,558.84
10%	6,271.30
5%	7,346.27
0%	16,374.90

End of Forecast

60370101
Pelotas Platform and Basin
Monte Carlo Results

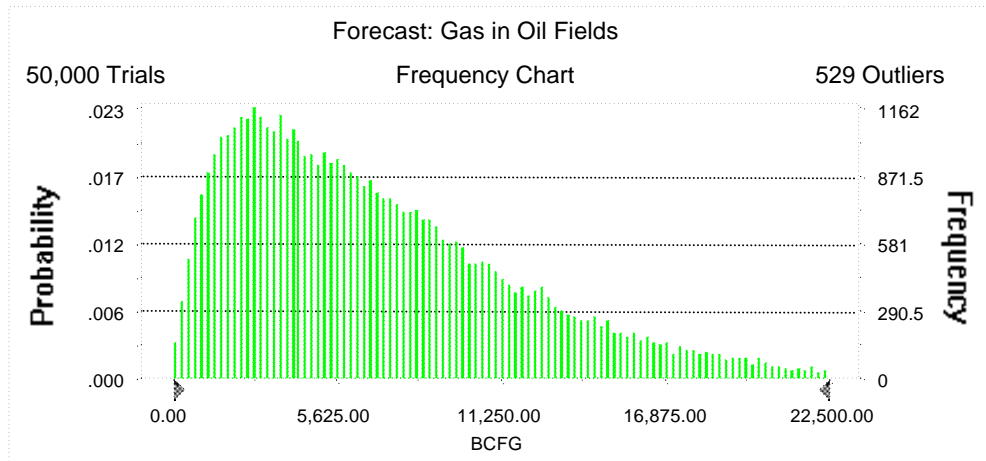
Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 22,500.00 BCFG
Entire range is from 16.69 to 46,802.18 BCFG
After 50,000 trials, the standard error of the mean is 22.61

Statistics:

	<u>Value</u>
Trials	50000
Mean	7,159.92
Median	6,072.04
Mode	---
Standard Deviation	5,055.59
Variance	25,559,039.37
Skewness	1.15
Kurtosis	4.55
Coefficient of Variability	0.71
Range Minimum	16.69
Range Maximum	46,802.18
Range Width	46,785.49
Mean Standard Error	22.61



60370101
Pelotas Platform and Basin
Monte Carlo Results

Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	16.69
95%	1,127.39
90%	1,717.40
85%	2,251.13
80%	2,747.41
75%	3,251.42
70%	3,765.79
65%	4,294.90
60%	4,869.70
55%	5,464.69
50%	6,072.04
45%	6,721.92
40%	7,415.69
35%	8,166.89
30%	8,970.36
25%	9,893.22
20%	10,993.46
15%	12,384.54
10%	14,180.43
5%	16,997.37
0%	46,802.18

End of Forecast

60370101
Pelotas Platform and Basin
Monte Carlo Results

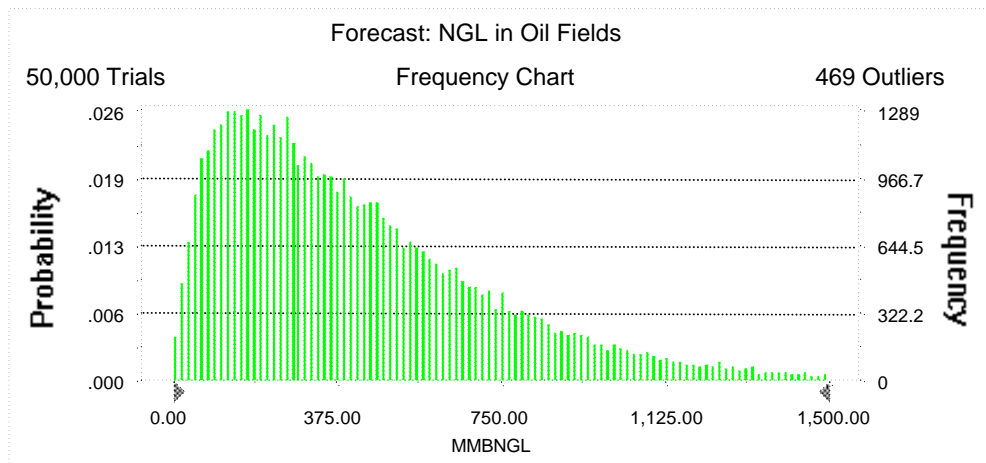
Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 1,500.00 MMBNGL
Entire range is from 0.79 to 3,259.10 MMBNGL
After 50,000 trials, the standard error of the mean is 1.44

Statistics:

	<u>Value</u>
Trials	50000
Mean	429.44
Median	353.62
Mode	---
Standard Deviation	321.68
Variance	103,477.22
Skewness	1.39
Kurtosis	5.78
Coefficient of Variability	0.75
Range Minimum	0.79
Range Maximum	3,259.10
Range Width	3,258.31
Mean Standard Error	1.44



60370101
Pelotas Platform and Basin
Monte Carlo Results

Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.79
95%	64.34
90%	97.98
85%	128.32
80%	157.40
75%	187.15
70%	217.81
65%	249.73
60%	280.82
55%	316.21
50%	353.62
45%	393.15
40%	435.87
35%	480.03
30%	531.48
25%	590.69
20%	659.84
15%	747.41
10%	862.21
5%	1,054.70
0%	3,259.10

End of Forecast

60370101
Pelotas Platform and Basin
Monte Carlo Results

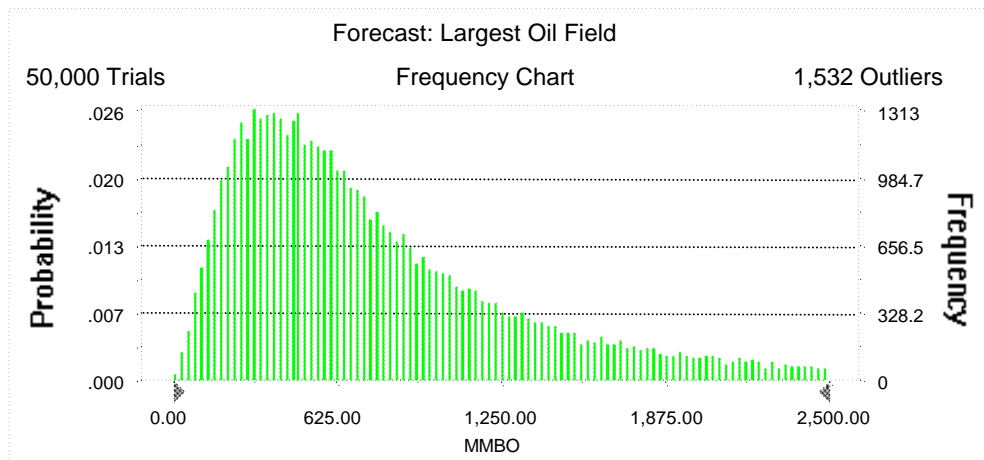
Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 2,500.00 MMBO
Entire range is from 9.77 to 3,499.72 MMBO
After 50,000 trials, the standard error of the mean is 2.83

Statistics:

	<u>Value</u>
Trials	50000
Mean	824.36
Median	639.25
Mode	---
Standard Deviation	633.72
Variance	401,604.11
Skewness	1.56
Kurtosis	5.49
Coefficient of Variability	0.77
Range Minimum	9.77
Range Maximum	3,499.72
Range Width	3,489.94
Mean Standard Error	2.83



60370101
Pelotas Platform and Basin
Monte Carlo Results

Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	9.77
95%	163.53
90%	226.46
85%	278.41
80%	327.78
75%	377.00
70%	425.76
65%	476.51
60%	528.19
55%	582.72
50%	639.25
45%	704.00
40%	776.31
35%	858.39
30%	955.32
25%	1,071.98
20%	1,218.74
15%	1,412.61
10%	1,699.65
5%	2,185.03
0%	3,499.72

End of Forecast

60370101
Pelotas Platform and Basin
Monte Carlo Results

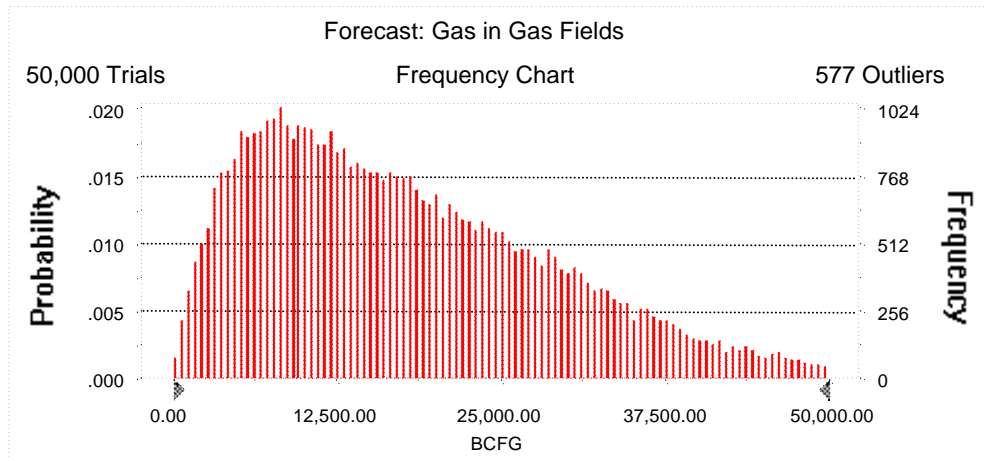
Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 50,000.00 BCFG
Entire range is from 92.56 to 86,924.32 BCFG
After 50,000 trials, the standard error of the mean is 52.16

Statistics:

	<u>Value</u>
Trials	50000
Mean	18,079.39
Median	15,925.32
Mode	---
Standard Deviation	11,663.31
Variance	136,032,852.75
Skewness	0.84
Kurtosis	3.44
Coefficient of Variability	0.65
Range Minimum	92.56
Range Maximum	86,924.32
Range Width	86,831.77
Mean Standard Error	52.16



60370101
Pelotas Platform and Basin
Monte Carlo Results

Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	92.56
95%	3,219.02
90%	4,822.33
85%	6,199.88
80%	7,511.20
75%	8,761.61
70%	10,094.97
65%	11,452.02
60%	12,856.47
55%	14,340.58
50%	15,925.32
45%	17,555.45
40%	19,250.35
35%	21,137.24
30%	23,186.65
25%	25,376.47
20%	27,921.00
15%	30,773.72
10%	34,426.63
5%	40,028.71
0%	86,924.32

End of Forecast

60370101
Pelotas Platform and Basin
Monte Carlo Results

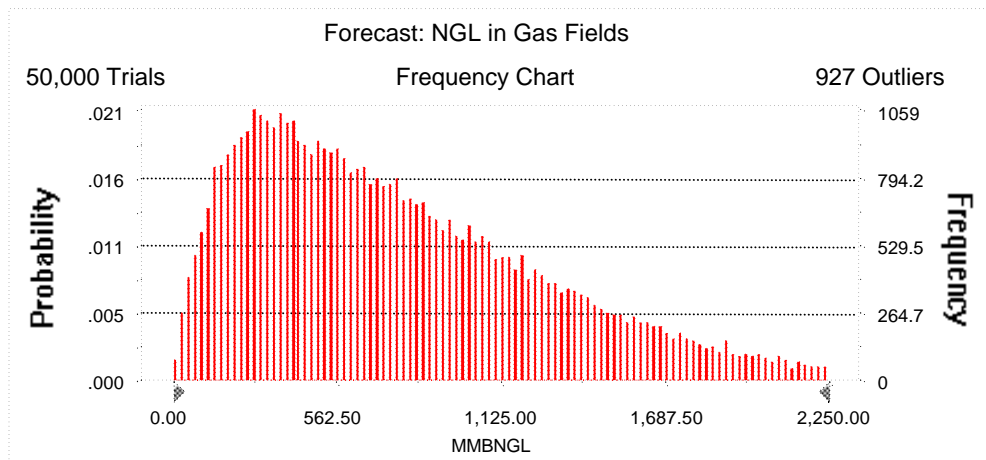
Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 2,250.00 MMBNGL
Entire range is from 4.01 to 4,328.18 MMBNGL
After 50,000 trials, the standard error of the mean is 2.45

Statistics:

	<u>Value</u>
Trials	50000
Mean	795.73
Median	679.09
Mode	---
Standard Deviation	548.02
Variance	300,325.47
Skewness	1.08
Kurtosis	4.26
Coefficient of Variability	0.69
Range Minimum	4.01
Range Maximum	4,328.18
Range Width	4,324.17
Mean Standard Error	2.45



60370101
Pelotas Platform and Basin
Monte Carlo Results

Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	4.01
95%	134.89
90%	200.60
85%	260.15
80%	314.26
75%	369.93
70%	424.88
65%	485.49
60%	546.17
55%	610.22
50%	679.09
45%	750.82
40%	826.83
35%	910.21
30%	1,004.83
25%	1,103.44
20%	1,224.31
15%	1,368.51
10%	1,557.77
5%	1,854.08
0%	4,328.18

End of Forecast

60370101
Pelotas Platform and Basin
Monte Carlo Results

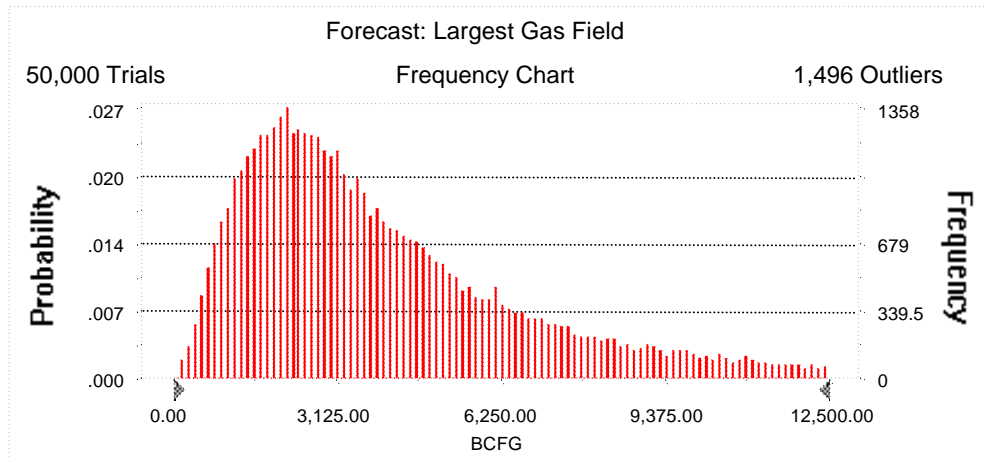
Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 12,500.00 BCFG
Entire range is from 86.86 to 16,999.66 BCFG
After 50,000 trials, the standard error of the mean is 13.85

Statistics:

	<u>Value</u>
Trials	50000
Mean	4,243.57
Median	3,358.58
Mode	---
Standard Deviation	3,097.02
Variance	9,591,528.29
Skewness	1.50
Kurtosis	5.28
Coefficient of Variability	0.73
Range Minimum	86.86
Range Maximum	16,999.66
Range Width	16,912.80
Mean Standard Error	13.85



60370101
Pelotas Platform and Basin
Monte Carlo Results

Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	86.86
95%	924.33
90%	1,266.31
85%	1,552.57
80%	1,811.57
75%	2,059.65
70%	2,297.91
65%	2,548.82
60%	2,801.80
55%	3,074.54
50%	3,358.58
45%	3,683.65
40%	4,052.71
35%	4,465.86
30%	4,926.73
25%	5,475.98
20%	6,203.63
15%	7,149.15
10%	8,507.45
5%	10,900.02
0%	16,999.66

End of Forecast

60370101
Pelotas Platform and Basin
Monte Carlo Results

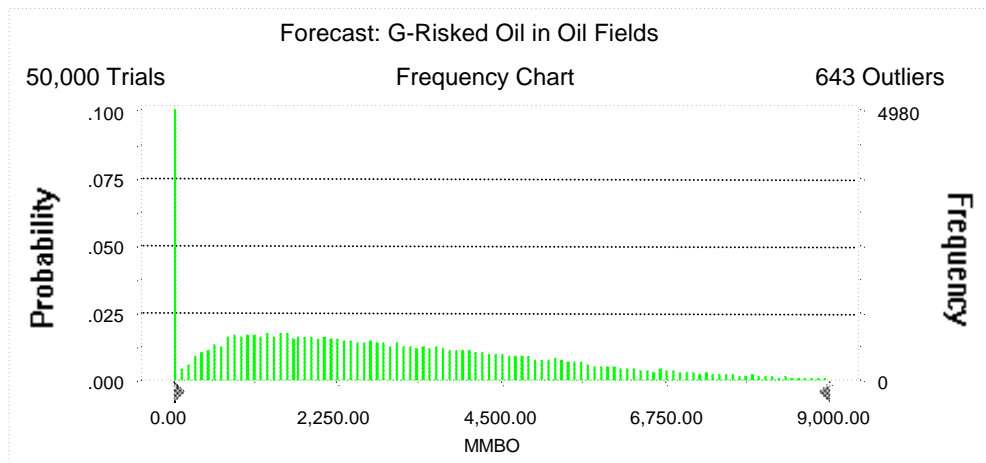
Forecast: G-Riskd Oil in Oil Fields

Summary:

Display range is from 0.00 to 9,000.00 MMBO
Entire range is from 0.00 to 16,374.90 MMBO
After 50,000 trials, the standard error of the mean is 10.10

Statistics:

	<u>Value</u>
Trials	50000
Mean	2,937.77
Median	2,547.95
Mode	0.00
Standard Deviation	2,258.89
Variance	5,102,580.05
Skewness	0.83
Kurtosis	3.47
Coefficient of Variability	0.77
Range Minimum	0.00
Range Maximum	16,374.90
Range Width	16,374.90
Mean Standard Error	10.10



60370101
Pelotas Platform and Basin
Monte Carlo Results

Forecast: G-Risk Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	0.00
95%	0.00
90%	102.23
85%	598.82
80%	896.90
75%	1,162.75
70%	1,429.14
65%	1,693.69
60%	1,969.03
55%	2,251.09
50%	2,547.95
45%	2,857.76
40%	3,182.62
35%	3,541.35
30%	3,914.13
25%	4,335.94
20%	4,813.77
15%	5,366.07
10%	6,091.41
5%	7,183.64
0%	16,374.90

End of Forecast

60370101
Pelotas Platform and Basin
Monte Carlo Results

Forecast: G-Risk Gas in Oil Fields

Summary:

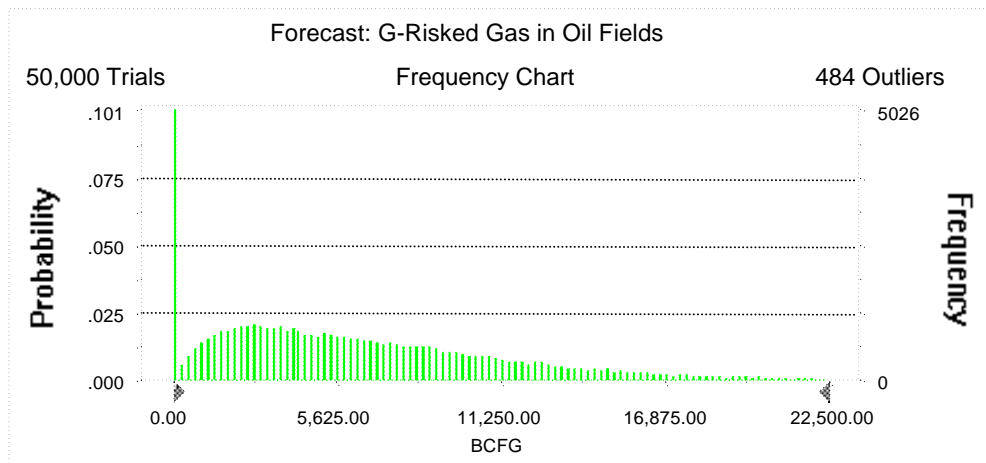
Display range is from 0.00 to 22,500.00 BCFG

Entire range is from 0.00 to 46,802.18 BCFG

After 50,000 trials, the standard error of the mean is 23.50

Statistics:

	<u>Value</u>
Trials	50000
Mean	6,466.60
Median	5,420.90
Mode	0.00
Standard Deviation	5,253.65
Variance	27,600,824.78
Skewness	1.08
Kurtosis	4.34
Coefficient of Variability	0.81
Range Minimum	0.00
Range Maximum	46,802.18
Range Width	46,802.18
Mean Standard Error	23.50



60370101
Pelotas Platform and Basin
Monte Carlo Results

Forecast: G-Risk Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	0.00
95%	0.00
90%	202.49
85%	1,235.81
80%	1,870.86
75%	2,444.63
70%	2,997.34
65%	3,575.73
60%	4,151.53
55%	4,767.11
50%	5,420.90
45%	6,097.80
40%	6,819.63
35%	7,604.12
30%	8,456.38
25%	9,382.24
20%	10,510.88
15%	11,885.06
10%	13,697.81
5%	16,605.15
0%	46,802.18

End of Forecast

60370101
Pelotas Platform and Basin
Monte Carlo Results

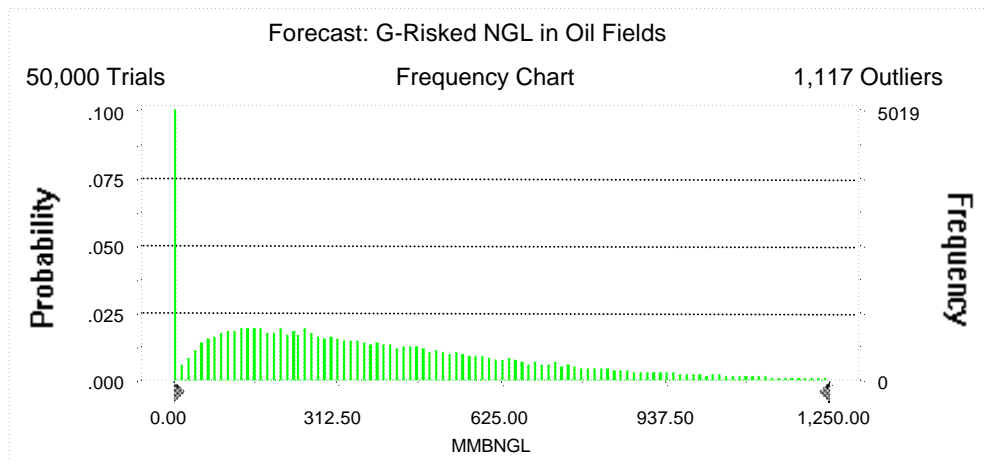
Forecast: G-Riskd NGL in Oil Fields

Summary:

Display range is from 0.00 to 1,250.00 MMBNGL
Entire range is from 0.00 to 3,259.10 MMBNGL
After 50,000 trials, the standard error of the mean is 1.48

Statistics:

	<u>Value</u>
Trials	50000
Mean	387.81
Median	313.77
Mode	0.00
Standard Deviation	330.99
Variance	109,556.79
Skewness	1.32
Kurtosis	5.43
Coefficient of Variability	0.85
Range Minimum	0.00
Range Maximum	3,259.10
Range Width	3,259.10
Mean Standard Error	1.48



60370101
Pelotas Platform and Basin
Monte Carlo Results

Forecast: G-Riskied NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.00
95%	0.00
90%	11.51
85%	70.52
80%	106.21
75%	139.67
70%	172.00
65%	206.13
60%	240.84
55%	275.25
50%	313.77
45%	355.32
40%	399.24
35%	446.77
30%	497.75
25%	557.86
20%	629.44
15%	717.04
10%	832.63
5%	1,027.04
0%	3,259.10

End of Forecast

60370101
Pelotas Platform and Basin
Monte Carlo Results

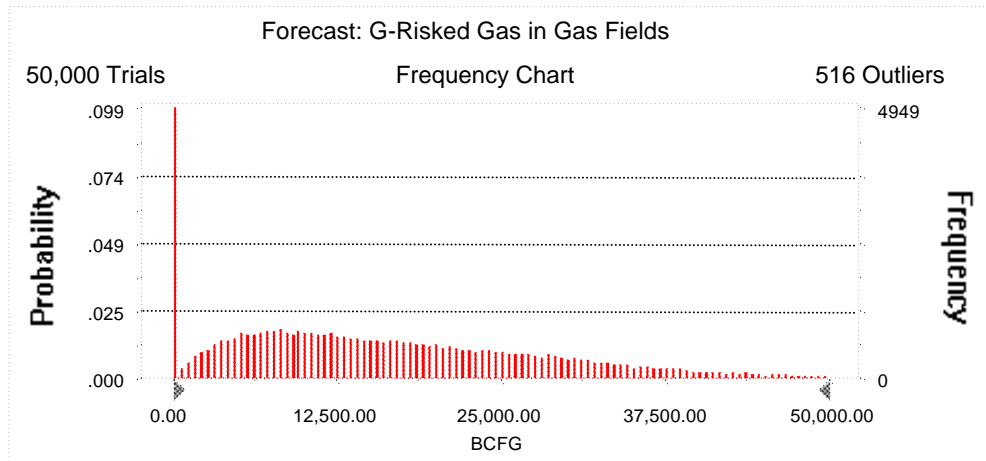
Forecast: G-Risk Gas in Gas Fields

Summary:

Display range is from 0.00 to 50,000.00 BCFG
Entire range is from 0.00 to 86,924.32 BCFG
After 50,000 trials, the standard error of the mean is 55.12

Statistics:

	<u>Value</u>
Trials	50000
Mean	16,339.13
Median	14,221.50
Mode	0.00
Standard Deviation	12,326.19
Variance	151,934,844.97
Skewness	0.77
Kurtosis	3.26
Coefficient of Variability	0.75
Range Minimum	0.00
Range Maximum	86,924.32
Range Width	86,924.32
Mean Standard Error	55.12



60370101
Pelotas Platform and Basin
Monte Carlo Results

Forecast: G-Risk Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	0.00
95%	0.00
90%	636.67
85%	3,502.92
80%	5,242.31
75%	6,717.81
70%	8,156.27
65%	9,593.20
60%	11,045.79
55%	12,571.67
50%	14,221.50
45%	15,977.02
40%	17,777.51
35%	19,742.88
30%	21,870.72
25%	24,223.29
20%	26,856.01
15%	29,849.79
10%	33,597.36
5%	39,186.60
0%	86,924.32

End of Forecast

60370101
Pelotas Platform and Basin
Monte Carlo Results

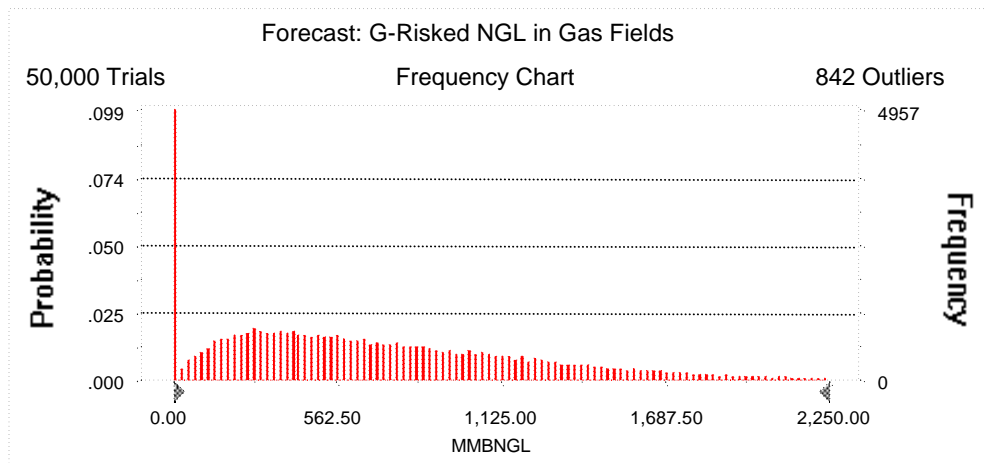
Forecast: G-Riskd NGL in Gas Fields

Summary:

Display range is from 0.00 to 2,250.00 MMBNGL
Entire range is from 0.00 to 4,328.18 MMBNGL
After 50,000 trials, the standard error of the mean is 2.56

Statistics:

	<u>Value</u>
Trials	50000
Mean	719.45
Median	605.58
Mode	0.00
Standard Deviation	572.72
Variance	328,007.42
Skewness	1.00
Kurtosis	4.04
Coefficient of Variability	0.80
Range Minimum	0.00
Range Maximum	4,328.18
Range Width	4,328.18
Mean Standard Error	2.56



60370101
Pelotas Platform and Basin
Monte Carlo Results

Forecast: G-Riskied NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.00
95%	0.00
90%	26.81
85%	145.60
80%	217.09
75%	281.19
70%	342.16
65%	403.92
60%	468.84
55%	536.81
50%	605.58
45%	681.40
40%	762.85
35%	848.05
30%	944.80
25%	1,051.14
20%	1,172.56
15%	1,319.97
10%	1,514.48
5%	1,810.92
0%	4,328.18

End of Forecast

60370101
Pelotas Platform and Basin
Monte Carlo Results

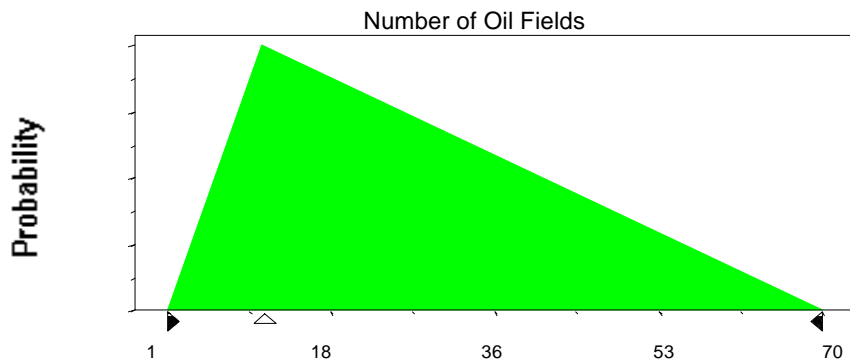
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	1
Likeliest	11
Maximum	70

Selected range is from 1 to 70
Mean value in simulation was 27



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	116.86
Standard Deviation	303.43

Shifted parameters

124.86
303.43

Selected range is from 0.00 to 3,492.00

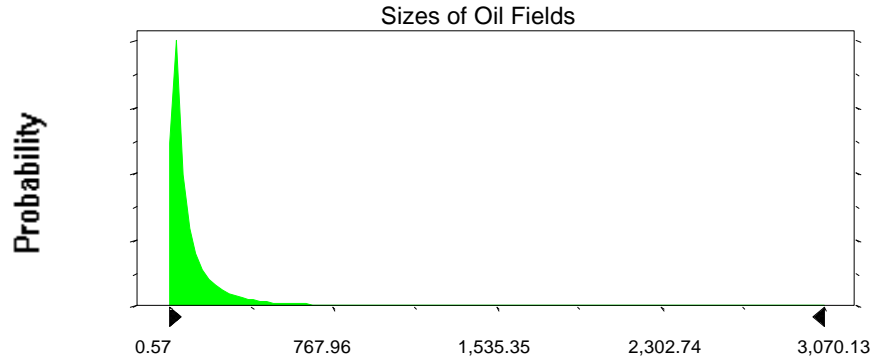
8.00 to 3,500.00

Mean value in simulation was 111.47

119.47

60370101
Pelotas Platform and Basin
Monte Carlo Results

Assumption: Sizes of Oil Fields (cont'd)



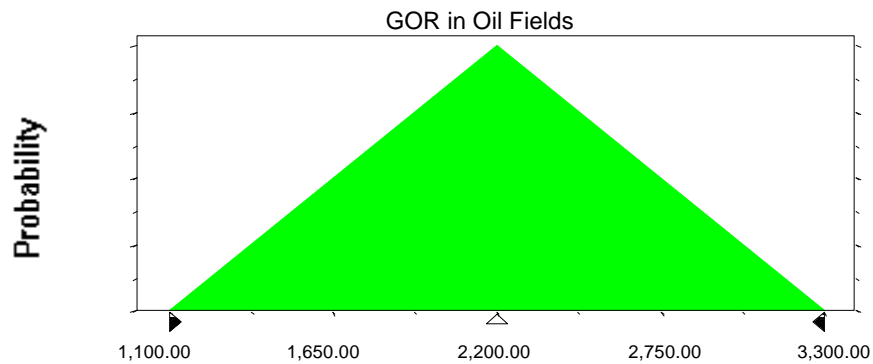
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	1,100.00
Likeliest	2,200.00
Maximum	3,300.00

Selected range is from 1,100.00 to 3,300.00

Mean value in simulation was 2,199.85



60370101
Pelotas Platform and Basin
Monte Carlo Results

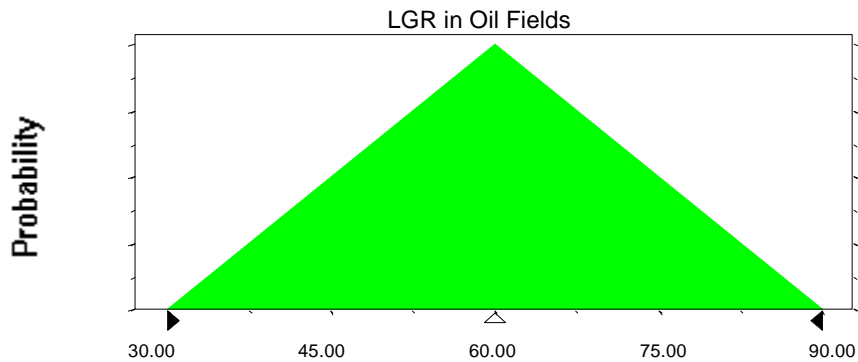
Assumption: LGR in Oil Fields

Triangular distribution with parameters:

Minimum	30.00
Likeliest	60.00
Maximum	90.00

Selected range is from 30.00 to 90.00

Mean value in simulation was 60.00



Assumption: Number of Gas Fields

Triangular distribution with parameters:

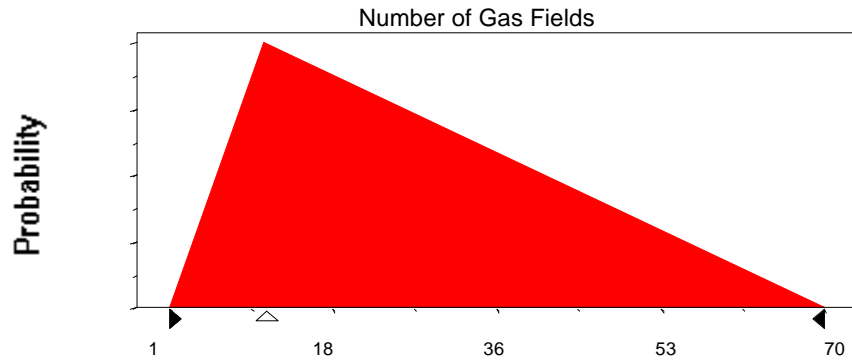
Minimum	1
Likeliest	11
Maximum	70

Selected range is from 1 to 70

Mean value in simulation was 27

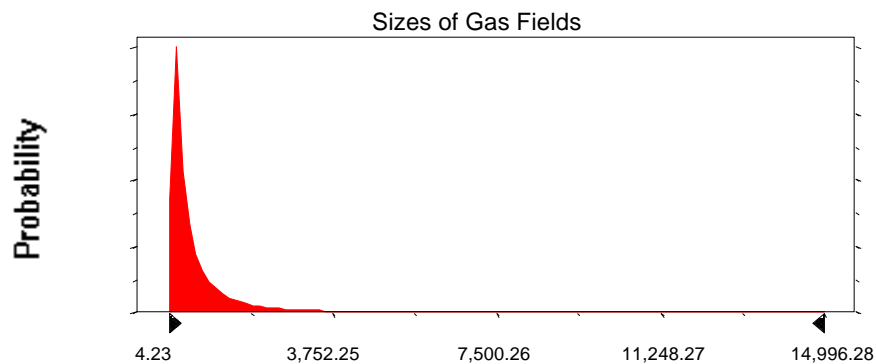
60370101
Pelotas Platform and Basin
Monte Carlo Results

Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:	Shifted parameters
Mean	637.15
Standard Deviation	1,479.61
Selected range is from 0.00 to 16,952.00	48.00 to 17,000.00
Mean value in simulation was 609.68	657.68



60370101
Pelotas Platform and Basin
Monte Carlo Results

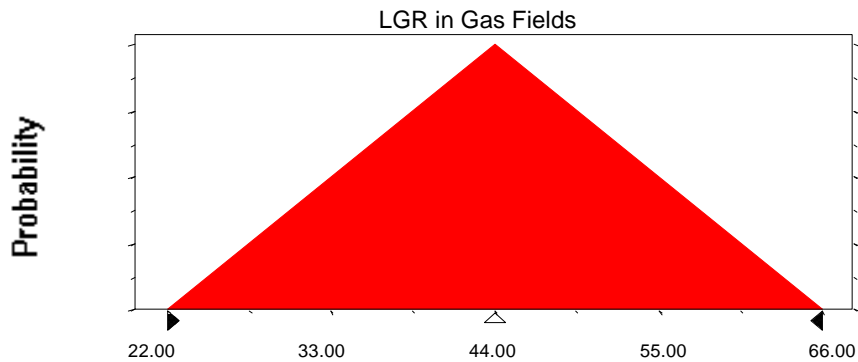
Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	22.00
Likeliest	44.00
Maximum	66.00

Selected range is from 22.00 to 66.00

Mean value in simulation was 44.01



End of Assumptions

Simulation started on 11/17/99 at 17:37:43

Simulation stopped on 11/17/99 at 18:12:17